

The 1982 New Mexico State University publication, "New Mexico Brush Inventory," (Range Tech Note #76) provides data indicating that shrub oaks cover 4,971,300 acres of mountain foothills in 17 counties. The report indicates that dense stands of the shrub oaks have little grazing value but provide valuable browse to wildlife and livestock where it occurs in a balanced composition with other forage plants. The special role of acorns, which sometimes constitute a large (seasonal) portion of the diet for deer, elk, and turkey, as well as other small mammals, is noted in the report.

With the emerging economic values of fee hunting becoming more evident, it is important that planners consider the importance of shrub oak sites in ranch planning.

The Colorado Game and Fish Department has reported on the effects of burning, herbiciding, and chaining of Gambel Oak sites. Comparisons were made with data gathered on untreated control sites.

Evaluations made two years after treatment showed that summer vegetation production had increased 50 percent on herbicided sites, 20 percent on chained sites, and decreased 17 percent on sites which were burned. Most of the increases on sprayed areas occurred among grasses, which increased 295 percent. The loss occurring on burned sites was in the shrub component. Chaining produced the highest browse response, and the second best grass response.

Data was grouped according to effects on forage values for elk, deer, and cattle.

Elk: Treatments with herbicide produced the largest increase in spring, summer, and fall forage. Chaining produced the most winter elk forage, and was second best for spring, summer, and fall forage. Burned areas produced less elk forage during all seasons.

Deer: Chaining produced 1.25 times more fall and winter deer forage. Herbicide increased spring and summer forage by 1.3 times. Burning decreased deer forage during all seasons.

Cattle: Herbiciding increased summer cattle forage by 2.16 times, chaining increased summer forage by 1.24 times, while burning produced only 95 percent of unburned controls.

Year long observations made on the use of treatment areas, as compared to use made of control areas, showed that:

Elk density per section increased 45 percent during fall, winter, and spring on burned areas, decreased 48 percent on herbicided areas, and decreased 70 percent on chainings.

Deer density per section during fall, winter, and spring decreased 25 percent on burned, 6 percent on herbicided, and 53 percent on chained sites.